

Appl. No. 09/608,976  
Amtd. dated December 16, 2003  
Reply to Office Action of October 17, 2003

CURRENTLY PENDING CLAIMS

The listing of claims below replaces all prior versions, and listings, of claims:

1       1. (Previously Presented) A method of presenting an execution plan for a  
2 query, comprising:

3                 determining steps of the query execution plan for a parallel database  
4 system;

5                 displaying the steps of the query execution plan in a graphical user  
6 interface; and

7                 depicting parallel execution of steps of the query execution plan in the  
8 graphical user interface,

9                 wherein depicting the parallel execution of steps comprises displaying  
10 plural elements corresponding to concurrently executing plural steps on respective  
11 processors of the parallel database system.

1       2. (Previously Presented) The method of claim 1, wherein determining the  
2 steps comprises determining steps of the query execution plan for the parallel database  
3 system running in a multiprocessing platform having plural processors.

1       3. (Previously Presented) The method of claim 1, wherein determining the  
2 steps comprises determining steps of the query execution plan for the parallel database  
3 system running in a platform having plural virtual processors to handle access to data in  
4 the parallel database system.

1       4. (Previously Presented) The method of claim 1, wherein displaying the  
2 plural elements comprises displaying plural icons.

1       5. (Previously Presented) The method of claim 4, wherein the database  
2 management system is executable in a platform, and wherein displaying the icons  
3 comprises displaying one or more of the icons selected from the group consisting of an  
4 icon representing a table, an icon representing an operation performed on a component of

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5 the platform, an icon representing a query statement, and icon representing an operation  
6 performed on two or more tables.

1           6. (Original) The method of claim 1, wherein determining the steps of the  
2 query execution plan is performed by an optimizer.

1           7. (Previously Presented) The method of claim 6, wherein determining the  
2 steps of the query execution plan is performed by the optimizer based on emulated  
3 environment data of a target system, the optimizer and emulated environment data  
4 present in a test system, the target system comprising the parallel database system.

1           8. (Previously Presented) The method of claim 1, wherein determining the  
2 steps of the query execution plan is performed in a test system based on emulated  
3 environment data of a target system that is separate from the test system, the target  
4 system comprising the parallel database system.

1           9. (Original) The method of claim 1, further comprising displaying explain  
2 text of the query execution plan.

1           10. (Original) The method of claim 9, wherein displaying the explain text  
2 comprises displaying the explain text in a first screen, and wherein displaying the steps of  
3 the query execution plan comprises displaying the steps in a second screen.

1           11. (Original) A method of testing performance of a query, comprising:  
2           determining a first execution plan of the query under a first condition;  
3           determining a second execution plan of the query under a second  
4 condition; and  
5           displaying the first and second execution plans concurrently to enable  
6 comparison of the execution plans.

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1        12. (Original) The method of claim 11, wherein displaying the first and  
2 second execution plans comprises displaying the execution plans in a graphical user  
3 interface.

1        13. (Original) The method of claim 11, wherein displaying the first and  
2 second execution plans comprises displaying the execution plans in a graphical user  
3 interface having a first screen to display the first execution plan and a second screen to  
4 display the second execution plan.

1        14. (Original) The method of claim 11, wherein displaying the first and  
2 second execution plans comprises displaying a collection of icons to represent steps of  
3 each of the execution plans.

1        15. (Original) The method of claim 11, further comprising:  
2              determining a third execution plan of the query under a third condition;  
3              and  
4              displaying the first, second, and third execution plans concurrently to  
5 enable comparison of the execution plans.

1        16. (Original) The method of claim 11, wherein determining the first  
2 execution plan comprises determining an execution plan for the query in cooperation with  
3 a first version of a software module of a parallel database system.

1        17. (Original) The method of claim 16, wherein determining the second  
2 execution plan comprises determining an execution plan for the query in cooperation with  
3 a second version of the software module of the parallel database system.

1        18. (Original) The method of claim 11, wherein determining the first  
2 execution plan comprises determining an execution plan for the query in a system having  
3 a first arrangement.

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1        19. (Original) The method of claim 18, wherein determining the second  
2 execution plan comprises determining an execution plan for the query in a system having  
3 a second arrangement.

1        20. (Original) The method of claim 11, wherein determining the first  
2 execution plan comprises determining an execution plan involving a table having a first  
3 content.

1        21. (Original) The method of claim 20, wherein determining the second  
2 execution plan comprises determining an execution plan involving the table having a  
3 second content.

1        22. (Previously Presented) The method of claim 21, wherein the second  
2 content contains statistics.

1        23. (Previously Presented) A system comprising:  
2              a graphical user interface; and  
3              a controller to determine an execution plan of a query based on emulation  
4 data that emulates an environment of a target system in which a parallel database system  
5 is implemented,  
6              the controller to display a representation of the execution plan in the  
7 graphical user interface.

1        24. (Original) The system of claim 23, wherein the emulation data comprises  
2 cost-related information including a number of nodes in the target system and a number  
3 of CPUs in each node.

1        25. (Original) The system of claim 23, wherein the emulation data comprises  
2 cost-related information including a number of virtual processors running in the target  
3 system.

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1           26. (Original) The system of claim 23, wherein the emulation data comprises  
2 cost-related information relating to costs of doing operations in the target system.

1           27. (Original) The system of claim 23, wherein the emulation data represents a  
2 target system having a multi-node parallel processing system.

1           28. (Cancelled)

1           29. (Original) The system of claim 23, wherein the emulation data represents a  
2 target system running plural virtual processors for handling access to the parallel database  
3 system.

1           30. (Previously Presented) An article comprising one or more storage media  
2 containing instructions that when executed cause a controller to:

3                 determine an execution plan of a query for a parallel database system;  
4                 display the steps of the execution plan in a graphical user interface; and  
5                 depict parallel execution of steps of the execution plan in the graphical  
6                 user interface,

7                 wherein depicting the parallel execution of steps comprises displaying  
8                 plural elements corresponding to concurrently executing plural steps on respective  
9                 processors of the parallel database system.

1           31. (Previously Presented) The article of claim 30, wherein the instructions  
2 when executed cause the controller including an optimizer to determine the execution  
3 plan of the query.

1           32. (Previously Presented) The article of claim 30, wherein the instructions  
2 when executed cause the controller to receive environment information to emulate a  
3 target database system.

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1        33. (Previously Presented) The article of claim 32, wherein the instructions  
2        when executed cause the controller to determine the execution plan of the query based on  
3        the environment information.

1        34. (Previously Presented) The article of claim 30, wherein the execution plan  
2        comprises a first execution plan, wherein the instructions when executed cause the  
3        controller to further:

4              determine a second execution plan of the query for the parallel database  
5        system;

6              display the steps of the second execution plan concurrently with the steps  
7        of the first execution plan in the graphical user interface.

1        35. (Previously Presented) The method of claim 1, wherein displaying the  
2        plural elements comprises displaying the plural elements side-by-side to indicate  
3        concurrent execution of the respective steps.

1        36. (Previously Presented) The method of claim 35, further comprising  
2        displaying other elements in sequence with the plural side-by-side elements to indicate  
3        sequential execution of other steps corresponding to the other elements.

1        37. (Previously Presented) The method of claim 11, wherein determining the  
2        first execution plan comprises determining the first execution plan in a parallel database  
3        system environment, determining the second execution plan comprises determining the  
4        second execution plan in the parallel database system environment, and displaying each  
5        of the first and second execution plans comprises displaying plural elements  
6        corresponding to concurrently executing plural steps on respective processors of the  
7        parallel database system environment.

1        38. (Previously Presented) The method of claim 37, wherein displaying the  
2        plural elements comprises displaying the plural elements side-by-side to indicate  
3        concurrent execution of the respective steps.

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1        39. (Previously Presented) The method of claim 38, further comprising  
2        displaying other elements in sequence with the plural side-by-side elements to indicate  
3        sequential execution of other steps corresponding to the other elements.

1        40. (Previously Presented) The article of claim 30, wherein displaying the  
2        plural elements comprises displaying the plural elements side-by-side to indicate  
3        concurrent execution of the respective steps.

1        41. (Previously Presented) The article of claim 40, further comprising  
2        displaying other elements in sequence with the plural side-by-side elements to indicate  
3        sequential execution of other steps corresponding to the other elements.